

### **REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed April 9, 2007.

Claims 1, 3-11, and 25-27 are in this Application. Claims 2, and 12-24 were previously canceled and Claims 25-27 are withdrawn without prejudice. Thus, Claims 1, and 3-11 are currently pending in this Application. Claim 1 has been amended to incorporate the language of Claim 3, which has been canceled.

Claims 1 and 4-11 (“the claims”) are rejected under 35 U.S.C. §§ 102, 103(a), 112, and for nonstatutory obviousness-type double patenting (“ODP”). The claims are rejected under 35 U.S.C. § 112 for being indefinite. The claims are also rejected under § 102(a) and (e) as being anticipated by each of two patents filed by Duselis et al., U.S. Patent Nos. 6,506,248 and 6,346,146. The rejection under § 103(a) is in view of each Duselis reference, or alternatively, in view of Cook et al. (U.S. Patent No. 6,942,726) and Gregerson et al. (EP 263723).

#### **Rejections under 35 U.S.C. § 112**

Regarding the rejection under § 112, the Examiner has rejected Claim 1 because of the use of “greater than”. Further, the Examiner states that the combination of “between” with “about” is indefinite because they are contradictory. However, the Federal Circuit routinely acknowledges that “between about” is definite. *See Central Admixture Pharm. Servs. Inc. v. Advanced Cardiac Solutions, P.C.*, 82 U.S.P.Q.2d 1293 (Fed. Cir. 2007); *Zoltek Corp. v. U.S.*, 57 U.S.P.Q.2d 1257 (Fed.Cl. 2000). As such, Applicant respectfully submits that this language is acceptable and that no change is necessary.

The Examiner has also rejected the claims under 35 U.S.C. § 112, second paragraph, for failing to identify whether weight percent or volume percent for the recited range. Claim 1 has been amended to recite “wt”, for weight percent.

#### **Rejection for Obviousness-Type Double Patenting (ODP)**

The Examiner rejected Claim 1, and 4-11 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over all claims of U.S. Patent No. 6,506,248 B1 (Duselis et al.) and 6,346,146 B1. This rejection is respectfully traversed.

The Office argues that “Duselis is not limited to any particular ranges but is inclusive of any mixture between bleached fibers and unbleached fibers. This reference is good for all that it teaches and it is inclusive of applicant’s claimed mixture.” (Non-Final Office Action dated April 9, 2007, p. 5). However, this is merely stating that the claims of the ODP references “dominate” the claims of the present application. This is insufficient to support a finding of Obviousness Type Double Patenting. In this regard, the Federal Circuit has held in *In re Kaplan* that a double patenting rejection cannot be justified solely on the ground that the subject matter of a claim in a second patent or patent application is “dominated” by the claims of a first patent. *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678, 681 (Fed. Cir. 1986). In reversing the double patenting rejection in the *Kaplan* case, the Federal Circuit held as follows:

By domination we refer, in accordance with established patent law terminology, to that phenomenon, which grows out of the fact that patents have claims, whereunder one patent has a broad or “generic” claim which “reads on” an invention defined by a narrower or more specific claim in another patent, the former “dominating” the latter because the more narrowly claimed invention cannot be practiced without infringing the broader claim. . . . In possibly simpler terms, one patent dominates another if a claim of the first patent reads on a device built or process practiced according to the second patent disclosure. This commonplace situation is not, per se, double patenting as the [Examiner] seemed to think.

(*In re Kaplan*, 789 F.2d 1574, 229 USPQ 678, 681 (Fed. Cir. 1986))

To establish a *prima facie* case of nonstatutory-type (e.g. obviousness type) double patenting, the Examiner must identify the inventions claimed in the claims under consideration and in the patent claims as well as establish that any variation between the inventions claimed in the claims under consideration and the earlier-issued patent claims would have been obvious to a person of ordinary skill in the art. Additionally, the Examiner’s showing of obviousness must follow the analysis used to establish a *prima facie* case of obviousness. See *In re Longi*, 759 F.2d 887, 225 USPQ 645, 651 (Fed. Cir. 1985).

Furthermore, the benefits of mixing bleached and unbleached cellulose fibers in the manner as claimed in the claims of the present application were not recognized at the time of the filing of the ODP references. Therefore, there is no incentive to modify the ODP references in a manner as to achieve a combination as claimed in the present application.

Thus, the Examiner has failed establish a *prima facie* case of obviousness type double patenting since it has only been shown that the claims of the ODP references “dominate” the claims of the present application. Furthermore, Claims 1, 4-11 of the present application are directed to embodiments that provide surprising results (e.g., that bleached cellulose fibers when used in proper proportions with unbleached, standard grade cellulose fibers can result in a fiber cement composite material with substantially equal or even superior flexibility, strength, and other physical properties when compared to an equivalent composite material reinforced by the more costly and less abundant premium grade cellulose fibers), as shown in Figures 2-4, that were not anticipated by the ODP references or the other references cited by the Examiner.

#### **Rejection under 35 U.S.C. § 102 (a) and (e)**

The claims are rejected under § 102(a) and (e) as being anticipated by each of two patents filed by Duselis *et al.*, U.S. Patent Nos. 6,506,248 (“Duselis ‘248”) and 6,346,146 (“Duselis ‘146”).

The Examiner states at page 4 of the Office Action that “Duselis *et al.* teach a composition comprising a combination of blend of bleached and unbleached cellulose fibers in amounts overlapping applicants’ claims (see, for example, Duselis *et al.* 248 B1, col. 5, lines 15-21). Duselis *et al.* thus anticipate applicants’ claims.” The cited section is the only disclosure regarding the types of fiber that may be used, which provides “The cellulose fibres may be bleached, unbleached, partially bleached or mixtures thereof. The fibrous materials may be present in a concentration of 0 to 25 wt %, preferably 2 to 16 wt %, more preferably 5 to 15 wt % based on the weight *of the dry formulation*.” (Emphasis added).

It may worthwhile at the outset to note what Duselis *et al.* discloses or not. It does not disclose that *bleached fibers* are required. In fact, it does not disclose that fibers, *any* fibers, are required at all. Duselis *et al.* discloses only that if fibers, whatever their type, are provided, they

are preferably present to up to 25 weight percent *of the dry formulation*. Thus, Duselis '246 does not disclose that any fiber type is present as a percent *of the total cellulose fibers* (as recited in Claim 1). Duselis '246 does not disclose that *bleached* cellulose fibers are required. And, Duselis et al. does not disclose that “*bleached* fibers comprise between about 5 and 25 weight percent of the total cellulose fibers incorporated into the matrix.”

The Examiner, however, argues that the range of the *overall* fiber content of the mixture suggested in Duselis et al. overlaps that of Claim 1, and thus, Duselis et al. anticipates it. This is contrary to the current state of the law. *Atofina v. Great Lakes Chemical Corp.*, 78 USPQ2d 1417 (Fed. Cir. 2006). In *Atofina*, in reversing the lower court's finding of anticipation based on overlapping temperature ranges, the Federal Circuit held that a genus cannot anticipate a species claim even through the claimed temperature range (330 to 450 °C) overlapped the range taught by the prior art patent (100 to 500 °C), because no specific embodiment was disclosed in the prior art patent that taught the claimed range. *Id.* at 1423-24. The Examiner is similarly arguing that a broadly described genus anticipates a specifically claimed species although Duselis fails to teach a specific embodiment within the claimed range.

The Examiner does not appear to give appropriate attention to the relative quantities of the fibers. The total fiber concentration Duselis et al. discloses is to the “weight percent of the overall dry formulation,” while Claim 1 recites fiber concentrations (specifically, bleached fibers) in the amount of the total cellulose fibers. Thus, the ranges are not comparable. However, assuming that they are, Duselis et al., nonetheless does not disclose the specific embodiment that bleached fibers must comprise “between about 5 and 25 weight percent of the total cellulose fibers incorporated into the matrix.” *c.f. Atofina* at 1423. Therefore, Claim 1 is not anticipated and is patentably distinct from these references. Applicant respectfully submits that the Office is in error and requests that the rejection be withdrawn.

### **Rejections under 35 U.S.C. § 103**

The rejection under § 103(a) is in view of each Duselis reference, or alternatively, in view of Cook *et al.* (U.S. Patent No. 6,942,726) and Gregerson *et al.* (EP 263723).

The Examiner states that the Duselis references do not teach specific fiber types (Office Action, p. 4) or lengths (Office Action, p. 5). Neither Duselis reference teaches a combination of bleached and unbleached cellulose fibers in which there is a greater amount of unbleached cellulose fibers than bleached cellulose fibers. The Office argues that “Duselis et al. teach a composition comprising a combination or blend of bleached and unbleached cellulose fibers in amounts overlapping applicants’ claims.” (See Office Action dated April 9, 2007, page 4). It is clear from Claim 1 that it requires both bleached and unbleached cellulose fibers. It is also clear that Claim 1 further requires that the amount of bleached cellulose fibers be between about 5 and 25 weight percent of the total amount of cellulose fibers.

The two Duselis references do not teach or suggest using a combination of bleached and unbleached fibers where the bleached cellulose fibers comprise between about 5 and 25 weight percent of the total cellulose fibers in the matrix. As stated in the Specification, and represented in the Figures, this is not known in the art. A composite material having a blend of bleached and unbleached fiber types where the bleached fibers comprise between about 5 and 25 weight percent of the total amount of cellulose fibers exhibiting physical characteristics that are substantially equal, if not superior, to a composite material without bleached fibers at that range is new in the art. (See [0014]). As shown in Figure 2, a fiber blend with the bleached fibers present in the claimed range maintains the strength of the composite material, while Figure 3 clearly demonstrates that bleached fibers in the recited range strongly imparts high strain resistance over fibers lacking the blend.

The Office next relies on Cook et al. for the teaching of specific examples of cellulose fibers and relies on Gregerson et al. for the teaching of specific fiber lengths. The results of strengthening the cement matrix by use of a combination of bleached and unbleached cellulose fibers wherein the bleached fibers comprise less than half of the total fibers in the matrix is unexpected and unrecognized even in the Applicant’s own work. Gregerson fails to teach or suggest the recited proportion of bleached fibers of between about 5 to 25 weight percent, and in fact, Gregerson would find the result surprising considering that in most cases Gregerson teaches utilizing the bleached to unbleached fibers in a ratio of three to one. This is far different from the

range required by Claim 1 of the present application. Therefore, it is clear the Gregerson teaches away from the claims of the present application prior to amendment.

Cook states that “the phrase ‘chemically treated’ cellulose fiber (or non-cellulose fiber) means a fiber that has been treated with a polyvalent metal-containing compound to produce a fiber with a polyvalent metal-containing compound bound to it.” (Cook, col. 4, lines 50-55). “Chemically treated” fibers therefore does not mean “bleached cellulose fibers.” Cook teaches, in some embodiments, using “chemically treated” fibers in combination with cellulose fibers. (Cook, col. 10, lines 46-63). However, there is no indication that there is a mixture of bleached and unbleached cellulose fibers. Cook is silent on the issue. If the Examiner is arguing from silence that since Cook does not exclude the combination that the combination is therefore taught, this appears to be incorrect since the absence of disclosure would amount to full disclosure, which seems absurd. Otherwise, the Examiner could argue that anything not excluded by this reference is taught by it, which therefore could cover any feature of any invention in any field. The Applicant would greatly appreciate being pointed to the authority for the Examiner’s position to permit Applicant the opportunity to rebut the argument on its merits.

Furthermore, Cook teaches that “bleached pulp, which is fibers that have been delignified to very low levels of lignin, are preferred, although unbleached kraft fibers may be preferred for some applications due to lower cost, especially if alkaline stability is not an issue.” (Cook, col. 4, lines 31-35). However, those skilled in the art will recognize that cementitious materials are inherently alkaline. Therefore, when reading Cook in its entirety for what it actually teaches, it is obvious that Cook actually teaches away from using unbleached fibers in cementitious materials since Cook teaches that unbleached fibers are unsuitable for alkaline substances. Furthermore, there is no teaching or suggestion in Cook to use a mixture of both bleached and unbleached cellulose fibers in the ratios required by the claims of the present application.

Thus, the teachings of the prior art are consistent with statements in the application as filed, the applicant states that “contrary to conventional wisdom, Applicant has found that bleached cellulose fibers when used in proper proportions with unbleached, standard grade cellulose fibers can result in a fiber cement composite material with substantially equal or even superior flexibility, strength, and other physical properties when compared to an equivalent

composite material reinforced by the more costly and less abundant premium grade cellulose fibers. Thus, the cited references, rather than teaching or suggesting the invention as claimed in the present application, actually lend support to the proposition that the present invention as recited in the claims is novel and non-obvious since the prior art teaches away from the present invention.

Because none of the references cited by the Examiner disclose, describe, teach or contemplate the limitations recited in Claim 1, either individually or in combination, independent Claim 1 is patentably distinct from these references, along with dependent Claims 4-11. As such, Applicant requests that the Examiner withdraw these rejections.

**CONCLUSION**

Applicants respectfully submit that the Application is in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

No fees are believed due, however, Applicants hereby authorize the Commissioner to charge any additional fees or refunds that may be required by this paper to Gardere Wynne Sewell LLP Deposit Account No. 07-0153. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Gardere Wynne Sewell LLP Deposit Account No. 07-0153.

**Please direct all correspondence to the practitioner listed below at Customer No. 60148.**

Respectfully submitted,



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